

WHAT IS CLAIMED IS:

SUB
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1. Alkali-free aluminoborosilicate glass having a coefficient of thermal expansion $\alpha_{20/300}$ of between $2.8 \times 10^{-5}/K$ and $3.8 \times 10^{-6}/K$, which has the following composition (in % by weight, based on oxide):

SiO ₂	> 58 - 65
B ₂ O ₃	> 6 - 10.5
Al ₂ O ₃	> 14 - 25
MgO	0 - < 3
CaO	0 - 9
SrO	0.1 - 1.5
BaO	> 5 - 8.5
with SrO + BaO	≤ 8.6
with MgO + CaO + SrO + BaO	8 - 18
ZnO	0 - < 2

2. Aluminoborosilicate glass according to Claim 1, characterized in that it comprises at least 18% by weight, preferably more than 18% by weight, of Al₂O₃.

3. Aluminoborosilicate glass according to Claim 1 or 2, characterized by the following composition (in % by weight, based on oxide):

SiO ₂	> 58 - 64.5
B ₂ O ₃	> 6 - 10.5
Al ₂ O ₃	> 18 - 24
MgO	0 - < 3
CaO	1 - < 8
SrO	0.1 - 1.5
BaO	> 5 - 8
with SrO + BaO	< 8.5
with MgO + CaO + SrO + BaO	8 - 18
ZnO	0 - < 2

4. Aluminoborosilicate glass according to at least one of Claims 1 to 3, characterized in that it comprises at least 20.5% by weight of Al_2O_3 .

5. Alkali-free aluminoborosilicate glass having a coefficient of thermal expansion $\alpha_{20/300}$ of between $2.8 \times 10^{-6}/\text{K}$ and $3.6 \times 10^{-6}/\text{K}$, which has the following composition (in % by weight, based on oxide):

SiO_2	> 58 - 64.5
B_2O_3	> 6 - 10.5
Al_2O_3	20.5 - 24
MgO	0 - < 3
CaO	2.5 - < 8
SrO	0.1 - 3.5
BaO	> 5 - 7.5
with $\text{SrO} + \text{BaO}$	≤ 8.6
with $\text{MgO} + \text{CaO} + \text{SrO} + \text{BaO}$	8 - 18
ZnO	0 - < 2

6. Aluminoborosilicate glass according to at least one of Claims 1 to 5, characterized in that it comprises at least 21.5% by weight of Al_2O_3 .

7. Aluminoborosilicate glass according to at least one of Claims 1 to 6, characterized in that it comprises more than 8% by weight of B_2O_3 .

8. Aluminoborosilicate glass according to at least one of Claims 1 to 7, characterized in that it comprises at least 0.1% by weight of ZnO .

9. Aluminoborosilicate glass according to at least one of Claims 1 to 8, characterized in that it additionally comprises:

ZrO_2	0 - 2
TiO_2	0 - 2
with $\text{ZrO}_2 + \text{TiO}_2$	0 - 2

As ₂ O ₃	0 - 1.5
Sb ₂ O ₃	0 - 1.5
SnO ₂	0 - 1.5
CeO ₂	0 - 1.5
Cl ⁻	0 - 1.5
F ⁻	0 - 1.5
SO ₄ ²⁻	0 - 1.5
with As ₂ O ₃ + Sb ₂ O ₃ + SnO ₂ + CeO ₂	≤ 1.5
+ Cl ⁻ + F ⁻ + SO ₄ ²⁻	

10. Aluminoborosilicate glass according to at least one of Claims 1 to 9, characterized in that it is free of arsenic oxide and antimony oxide, apart from unavoidable impurities, and that it can be produced in a float plant.

11. Aluminoborosilicate glass according to at least one of Claims 1 to 10, which has a coefficient of thermal expansion $\alpha_{20/300}$ of $2.8 \times 10^{-6}/K$ - $3.6 \times 10^{-6}/K$, a glass transition temperature T_g of $> 700^{\circ}C$ and a density ρ of $< 2.600 \text{ g/cm}^3$.

12. Use of the aluminoborosilicate glass according to at least one of Claims 1 to 11 as substrate glass in display technology.

13. Use of the aluminoborosilicate glass according to at least one of Claims 1 to 11 as substrate glass in thin-film photovoltaics.